

Version with Markings to show  
**CHANGES MADE**

HEPATOCYTE LINEAGE CELLS DERIVED FROM  
PLURIPOTENT STEM CELLS

USSN 09/718,308

Docket 093/002

**Claim amendments:**

**Cancel Claim 29**

30. (Amended) ~~Two isolated cell populations, which are~~ A set of isolated cell populations, consisting of:  
a first cell population that comprises undifferentiated cells from a line of human embryonic stem (hES) cells; and  
a second cell population, wherein at least ~60% of the cells in the second population are progeny of said hES cell line, and have at least three of the following characteristics:
- antibody-detectable expression of  $\alpha_1$ -antitrypsin (AAT);
  - antibody-detectable expression of albumin;
  - absence of antibody-detectable expression of  $\alpha$ -fetoprotein;
  - RT-PCR detectable expression of asialoglycoprotein receptor (ASGR);
  - evidence of glycogen storage;
  - evidence of cytochrome p450 activity;
  - evidence of glucose-6-phosphatase activity; and
  - the morphological features of hepatocytes.
31. (Amended) ~~The cell population of claim 29~~ set of claim 30, wherein at least about 60% of the cells in the second population have at least five of said characteristics.
32. (Amended) ~~The cell population of claim 29~~ set of claim 30, wherein at least about 80% of the cells in the second population have at least seven of said characteristics.
33. (Amended) ~~The cell population of claim 29, which has~~ set of claim 30, wherein cells in the second population have been genetically altered to express telomerase at an elevated level.
34. (New) The set of claim 30, wherein the first and second cell populations are in separate containers.
35. (New) The set of claim 30, wherein the second cell population has been obtained by culturing progeny of the hES cell line in a medium containing a histone deacetylase inhibitor.
36. (New) The set of claim 30, wherein the second cell population has been obtained by culturing progeny of the hES cell line in a medium containing butyrate.

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